

Title (en)

Method for removing phosphorus by gasification using a membrane bioreactor

Title (de)

Verfahren zur Phosphorelimination durch Gasbildung in einem Membranbioreaktors

Title (fr)

Procédé d'élimination de phosphore par formation de gaz dans un bioréacteur à membrane

Publication

EP 2253596 A1 20101124 (EN)

Application

EP 10162900 A 20100516

Priority

CN 200910115350 A 20090515

Abstract (en)

A method for removing phosphorus having steps of a) providing a membrane bioreactor having a membrane module having a lower part; b) aerating intensively the lower part of the membrane module while controlling dissolved oxygen concentration around the membrane module at more than 2 mg/L and dissolved oxygen concentration in the rest zone at less than 1 mg/L so as to form an aerobic zone, a facultative aerobic zone, and an anaerobic zone; and c) introducing sludge having a concentration of between 10,000 mg/L and 30,000 mg/L and having an organic loading of between 0.08 and 0.07 Kg (COD)/(Kg (MLSS) #cd) into the membrane reactor so that phosphorus is absorbed in the aerobic zone, released in the facultative aerobic zone, and reduced by phosphine-reducing bacteria into phosphine. The method for removing phosphorus does not include discharging sludge. An apparatus employed for the process does not take up much additional space.

IPC 8 full level

C02F 3/12 (2006.01); **C02F 3/30** (2006.01); **C02F 3/34** (2006.01)

CPC (source: EP US)

C02F 3/1273 (2013.01 - EP US); **C02F 3/301** (2013.01 - EP US); **C02F 3/308** (2013.01 - EP US); **C02F 3/34** (2013.01 - EP US); **C02F 3/20** (2013.01 - EP US); **C02F 2209/08** (2013.01 - EP US); **C02F 2209/22** (2013.01 - EP US); **C02F 2303/06** (2013.01 - EP US); **Y02W 10/10** (2015.05 - EP US)

Citation (search report)

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Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME RS

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DOCDB simple family (application)

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